

What is Biomagnetism?

The research field of Biomagnetism involves the measurement and study of the magnetic fields generated by the human body. Most of these magnetic fields are generated by the small electrical currents of the nervous system essential for the functioning of the human body. These magnetic fields can be a billion times smaller than the Earth's magnetic field.

Both the measurements and the analysis of such signals can be challenging, but modern techniques are able to extract the relevant electrophysiological signals very well. Because of the complexity of the origins of such signals it often takes a multidisciplinary approach to interpret them. Research teams typically consist of clinicians, psychologists, mathematicians, physicists and technicians. Such teams can be found in the many Biomagnetism research groups located in universities, institutions and hospitals all over the world.

Most research groups focus on the magnetic fields of the brain. This subfield of Biomagnetism, called magnetoencephalography or MEG, provides a unique window on the functioning of the brain.

This conference brings together researchers and clinicians studying all aspects of Biomagnetism. Over 500 people are expected to travel this summer to Halifax to participate. The emphasis of this conference will be on reporting the newest technical advances, the latest results and their clinical applications in medical environments.

Recent press coverage of the Biomagnetism conference "Biomag 2014" in Halifax can be found here:

World leading biomagnetism experts coming to Halifax

Global TV interview on brain research in Halifax

Brain technologies bring economic payoffs to Nova Scotia

Measuring the magnetic field
of the brain at the IWK children's
hospital in Halifax